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Mark B. Quatt

Registration No. 30,484

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Stevens

Serial No.: 10/070,771

Filing Date: October 23, 2002

Title: Method for Packaging and Packaging Apparatus

Docket No:43368-01

Examiner: Sipos, John

Group Art Unit: 3721

APPEAL BRIEF

Commissioner for Patents
Alexandria, VA 22313-1450

Dear Sir:

A Petition for two (2) months Extension of Time is enclosed.

This Brief is being filed in support of a Notice of Appeal filed October 1, 2004, in which the appellant appealed from the rejection of claims 1 to 15 in the Final Office Action dated July 1, 2004.

The Commissioner is authorized to charge the fee of \$500, for filing a brief in support of the appeal, to Deposit Account No. 07-1765.

The Commissioner is authorized to charge any additional fees that may be required or credit any overpayment to Deposit Account No. 07-1765.

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2-1-05

date

Respectfully submitted,

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Real Party in Interest

The real party in interest in this patent application is Cryovac, Inc.

Related Appeals and Interferences

There are no other prior or pending appeals, interferences, or judicial proceedings known to appellant, the appellant's legal representative, or assignee which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

Status of Claims

Claims 1 to 15 were originally filed in the present application.

In an response of April 8, 2004, claims 1 and 7 were amended.

The claims now on Appeal are claims 1 to 15.

A copy of the claims presently on Appeal appears in the Appendix.

Status of Amendments

The claims now on Appeal are claims 1 to 15.

These are the same claims that were finally rejected in the Final Office Action dated July 1, 2004. No amendments after Final have been sought or entered.

A copy of the claims presently on Appeal appears in the Appendix.

Summary of Claimed Subject Matter

(References to the specification by page and line numbers, and to the drawings by reference characters, are shown in parentheses.)

The present invention relates to a method of packaging and an apparatus which utilize a feed of packaging material in tubing form which is slit and unfolded to be formed around a fed product. (page 1, lines 3 to 6).

Generally, conventional form, fill and seal packaging machines and processes involve the supply of packaging material in continuous sheet form, commonly referred to as single wound material. The sheet material is supplied having a width as required for the wrapping process in question. Generally, the width of the sheet material is up to about 700 mm. The sheet material may be produced in various ways including using extrusion techniques, or via the production of a tube of the material which is subsequently collapsed and slit to provide two flat sheets. (page 1, lines 10 to 16)

The use of some types of plastic packaging materials may be limited when produced by conventional production methods due to limitations in the maximum possible widths of the flat sheets produced using these methods. Materials which are necessarily extruded and blown into a vertical bubble to induce shrink characteristics generally suffer from poor bubble stability. When the material in a semi-molten phase is inflated to a wider tube before the plastic sets, if the bubble is not stable due to the plastic properties and size of the bubble, then it may collapse ceasing production of the packaging material. The tolerances of the final packaging materials produced may be greatly affected using conventional production methods for flat sheet materials. Conventional processes of edge slitting the material to form two continuous flat sheets from a tube will produce flat sheets with variable width, the edges of which deviate quite markedly from a straight line. (page 1, lines 18 to 29).

The present invention provides a means for alleviating problems related to variation in width of a single wound packaging material, and provides a method and apparatus which may substantially avoid contamination of the product-contact surface of the packaging material prior to and during packaging of the product. (page 1, line 30 to page 2, line 7).

According to one aspect of the present invention there is provided a method for packaging comprising the steps of:

- (i) continuously feeding a packaging material as tubing (30) from a supply (32);
- (ii) slitting and unfolding (34) said tubing to form a flat web (36) of said packaging material;
- (iii) forming (18) said flat web (36) of packaging material around a fed product (16) and longitudinally heat sealing (22) the packaging material formed around the product; and
- (iv) cutting and sealing (24) the packaging material at one or both ends of the product.

(page 2, lines 8 to 16)

According to a second aspect of the present invention there is provided a packaging apparatus comprising:

- (i) means for receiving (34) packaging material continuously fed as tubing (30) from a supply (32), and slitting and unfolding the tubing to form a flat web (36) of the packaging material;
- (ii) calendering means (38) for receiving the flat web (36) and tensioning the flat web;
- (iii) forming means (18) for receiving the tensioned flat web and forming the flat web around a fed product (16);
- (iv) heat sealing means (22) for longitudinally heat sealing the packaging material formed around the product; and
- (v) end sealing means (24) for cutting and sealing the packaging material at one or both ends of the product.

(page 4, lines 13 to 23)

The slitting and unfolding means thus receives the continuous feed of packaging material, in **tubing** form, and slits and unfolds the tubing to form the flat web of the packaging material for subsequent calendering and forming around a fed product. (page 4, lines 24 to 26). The longitudinal seal as claimed is created by **heat sealing**. (page 5, lines 8 to 13.)

Grounds of Rejection to be reviewed on Appeal

The Grounds of Rejection to be reviewed on Appeal (per the Final Office Action mailed July 1, 2004) are as follows:

1. Claims 1 and 7 to 10 stand rejected under 35 U.S.C. §102(b) as being anticipated by US Patent No. 2,757,495 (Reichel).
2. Claim 2 stands rejected under 35 U.S. C. §103(a) as being unpatentable over US Patent No. 2,757,495 (Reichel) in view of US Patent No. 4,640,081 (Kawaguchi).
3. Claims 4 and 13 stand rejected under 35 U.S. C. §103(a) as being unpatentable over US Patent No. 2,757,495 (Reichel) in view of US Patent No. 3,592,372 (James).
4. Claims 5 and 12 stand rejected under 35 U.S. C. §103(a) as being unpatentable over US Patent No. 2,757,495 (Reichel) in view of US Patent No. 4,289,560 (Simons).
5. Claims 6 and 11 stand rejected under 35 U.S. C. §103(a) as being unpatentable over US Patent No. 2,757,495 (Reichel) in view of US Patent No. 4,601,159 (Mugnai).
6. Claim 15 stands rejected under 35 U.S. C. §103(a) as being unpatentable over US Patent No. 2,757,495 (Reichel) in view of US Patent No. 4,381,637 (Ballestrazi).
7. Claims 1 and 7 to 10 stand rejected under 35 U.S. C. §103(a) as being unpatentable over US Patent No. 4,947,623 (Saito), in view of US Patent No. 4,813,208 (Piltz) or US Patent No. 4,627,221 (Buchner) or US Patent No. 3,342,657 (Dyer).
8. Claim 2 stands rejected under 35 U.S. C. §103(a) as being unpatentable over US Patent No. 4,947,623 (Saito), in view of US Patent No. 4,813,208 (Piltz) or US Patent No. 4,627,221 (Buchner) or US Patent No. 3,342,657 (Dyer) and further in view of US Patent No. 4,640,081 (Kawaguchi).

9. Claims 4 and 13 stand rejected under 35 U.S. C. §103(a) as being unpatentable over US Patent No. 4,947,623 (Saito), in view of US Patent No. 4,813,208 (Piltz) or US Patent No. 4,627,221 (Buchner) or US Patent No. 3,342,657 (Dyer) and further in view of US Patent No. 3,592,372 (James).

10. Claims 5 and 12 stand rejected under 35 U.S. C. §103(a) as being unpatentable over US Patent No. 4,947,623 (Saito), in view of US Patent No. 4,813,208 (Piltz) or US Patent No. 4,627,221 (Buchner) or US Patent No. 3,342,657 (Dyer) and further in view of US Patent No. 4,289,560 (Simons).

11. Claims 6 and 11 stand rejected under 35 U.S. C. §103(a) as being unpatentable over US Patent No. 4,947,623 (Saito), in view of US Patent No. 4,813,208 (Piltz) or US Patent No. 4,627,221 (Buchner) or US Patent No. 3,342,657 (Dyer) and further in view of US Patent No. 4,601,159 (Mugnai).

12. Claim 15 stands rejected under 35 U.S. C. §103(a) as being unpatentable over US Patent No. 4,947,623 (Saito), in view of US Patent No. 4,813,208 (Piltz) or US Patent No. 4,627,221 (Buchner) or US Patent No. 3,342,657 (Dyer) and further in view of US Patent No. 4,381,637 (Ballestrazi).

Argument

1. Claims 1 and 7 to 10 are novel under 35 U.S.C. §102(b) and not anticipated by US Patent No. 2,757,495 (Reichel).

Reichel produces tubing which is slit open to produce a sheet (column 5, lines 40 to 47). A solvent or adhesive is applied to one edge of the sheet as it proceeds to the tube-forming sleeve 73 (column 5, lines 56 to 59) where the edges of the sleeve are overlapped and sealed together.

The Office Action takes the position that Reichel incorporates by reference Conti (US Patent No. 2,686,128). Reichel refers to the Conti patent as disclosing a system that may replace the stuffing and tube-forming systems shown in Reichel. The appellant is unable to locate the portion of Reichel that incorporates by reference the Conti patent. Appellant suggests that If Conti is not properly incorporated by reference, then any reliance on Conti does not justify a 35 U.S.C. §102(b) rejection based on Reichel, since the Office Action has not relied on a single document to establish the novelty rejection.

However, even if Conti were properly deemed incorporated by reference (or were relied on in a 103 combination with Reichel), appellant notes that at column 5, line 74 through column 6, line 6, Conti teaches the use of an alkaline adhesive material (column 2, line 20); see also column 3, lines 60 to 62; and column 4, lines 6, 14, 31, 50. A heating means, such as an electric heating coil or infrared lamp, is disclosed at column 5, but these heating devices are taught apparently as means to enhance the efficacy of the adhesive, e.g. to quicken the final setting of the adhesive (column 5, lines 42 to 57).

Thus, neither Reichel nor Conti teach the invention as now claimed, and including the process step of forming said flat web of packaging material around a fed product and longitudinally heat sealing the packaging material formed around the product (see claim 1), or the element of a heat sealing means for longitudinally heat sealing the packaging material formed around the product (see claim 7). Conti is essentially an adhesive (gluing) system where the adhesive is more rapidly cured by exposure to a heat coil or infrared lamp. This is much different than heat sealing, a process well known in the plastics art for sealing two thermoplastic films together.

The claims are therefore patentably distinct from, and not anticipated by, Reichel.

2. Claim 2 is patentable under 35 U.S. C. §103(a) over US Patent No. 2,757,495 (Reichel) in view of US Patent No. 4,640,081 (Kawaguchi).

Appellant relies on the above comments that Reichel (and Conti) do not teach heat sealing to bond the materials together.

3. Claims 4 and 13 are patentable under 35 U.S. C. §103(a) over US Patent No. 2,757,495 (Reichel) in view of US Patent No. 3,592,372 (James).

Appellant relies on the above comments that Reichel (and Conti) do not teach heat sealing to bond the materials together.

4. Claims 5 and 12 are patentable under 35 U.S. C. §103(a) over US Patent No. 2,757,495 (Reichel) in view of US Patent No. 4,289,560 (Simons).

Appellant relies on the above comments that Reichel (and Conti) do not teach heat sealing to bond the materials together.

5. Claims 6 and 11 are patentable under 35 U.S. C. §103(a) over US Patent No. 2,757,495 (Reichel) in view of US Patent No. 4,601,159 (Mugnai).

Appellant relies on the above comments that Reichel (and Conti) do not teach heat sealing to bond the materials together.

6. Claim 15 is patentable under 35 U.S. C. §103(a) over US Patent No. 2,757,495 (Reichel) in view of US Patent No. 4,381,637 (Ballestrazi).

Appellant relies on the above comments that Reichel (and Conti) do not teach heat sealing to bond the materials together.

7. Claims 1 and 7 to 10 are patentable under 35 U.S. C. §103(a) over US Patent No. 4,947,623 (Saito), in view of US Patent No. 4,813,208 (Piltz) or US Patent No. 4,627,221 (Buchner) or US Patent No. 3,342,657 (Dyer).

The Office Action recognizes that Saito lacks the use of a tube for the initial wrapping web. The Office Action then concludes that

[t]he secondary references all teach the concept of feeding of a tubing to a slitting mechanism for longitudinally slitting the tube and an unfolding means for forming the slit tube into a flat web for subsequent use in a packaging operation. It would have been obvious to one skilled in the art to form the web of Saito from a tube as

shown by any of the secondary references to ease the formation of the web and to maintain the interior clean.

Applicant respectfully disagrees with this conclusion.

The statement in the Office Action is inapplicable to the claims originally presented, and now presented. Process claim 1 requires the step of forming said flat web of packaging material **around a fed product**. Apparatus claim 7 requires forming means for receiving the tensioned flat web and forming the flat web around a fed product. None of the secondary references relied on teach this feature of the invention.

In Piltz, a flattened web is formed into a tube to make a container ("pipe", column 5, line 16 and Figures 5 and 8); or thermoformed into a tray, column 5, line 61 and Figure 13). The web is not formed around a fed product; on the contrary, the product takes the shape of, or is deposited in, the preexisting container.

In Buchner, beaker containers (column 2, lines 45 to 47) are filled at a filling station (column 3, lines 41 to 43. Again, the web is not formed around the fed product; instead, the product is deposited in the container.

Dyer has to do with film extrusion, where a tubular film is extruded and oriented at a bias to the direction of orientation, and slit. No product is discussed; no reference to reformation into a tube that is then formed around a fed product.

8. Claim 2 is patentable under 35 U.S. C. §103(a) over US Patent No. 4,947,623 (Saito), in view of US Patent No. 4,813,208 (Piltz) or US Patent No. 4,627,221 (Buchner) or US Patent No. 3,342,657 (Dyer) and further in view of US Patent No. 4,640,081 (Kawaguchi).

Appellant relies on the above comments that the secondary references relied on do not teach the step of forming the flat web of packaging material around a fed product (process claim 1) or a forming means for receiving the tensioned flat web and forming the flat web around a fed product (apparatus claim 7).

9. Claims 4 and 13 are patentable under 35 U.S. C. §103(a) over US Patent No. 4,947,623 (Saito), in view of US Patent No. 4,813,208 (Piltz) or US Patent No. 4,627,221 (Buchner) or US Patent No. 3,342,657 (Dyer) and further in view of US Patent No. 3,592,372 (James).

Appellant relies on the above comments that the secondary references relied on do not teach the step of forming the flat web of packaging material around a fed product

(process claim 1) or a forming means for receiving the tensioned flat web and forming the flat web around a fed product (apparatus claim 7).

10. Claims 5 and 12 are patentable under 35 U.S. C. §103(a) over US Patent No. 4,947,623 (Saito), in view of US Patent No. 4,813,208 (Piltz) or US Patent No. 4,627,221 (Buchner) or US Patent No. 3,342,657 (Dyer) and further in view of US Patent No. 4,289,560 (Simons).

Appellant relies on the above comments that the secondary references relied on do not teach the step of forming the flat web of packaging material around a fed product (process claim 1) or a forming means for receiving the tensioned flat web and forming the flat web around a fed product (apparatus claim 7).

11. Claims 6 and 11 are patentable under 35 U.S. C. §103(a) over US Patent No. 4,947,623 (Saito), in view of US Patent No. 4,813,208 (Piltz) or US Patent No. 4,627,221 (Buchner) or US Patent No. 3,342,657 (Dyer) and further in view of US Patent No. 4,601,159 (Mugnai).

Appellant relies on the above comments that the secondary references relied on do not teach the step of forming the flat web of packaging material around a fed product (process claim 1) or a forming means for receiving the tensioned flat web and forming the flat web around a fed product (apparatus claim 7).

12. Claim 15 is patentable under 35 U.S. C. §103(a) over US Patent No. 4,947,623 (Saito), in view of US Patent No. 4,813,208 (Piltz) or US Patent No. 4,627,221 (Buchner) or US Patent No. 3,342,657 (Dyer) and further in view of US Patent No. 4,381,637 (Ballestrazi).

Appellant relies on the above comments that the secondary references relied on do not teach the step of forming the flat web of packaging material around a fed product (process claim 1) or a forming means for receiving the tensioned flat web and forming the flat web around a fed product (apparatus claim 7).

Applicants respectfully ask the Board to reverse the finding of the Final Action, and to find claims 1 to 15 patentable over the art of record.

Claims Appendix

What is claimed is:

1. A method for packaging comprising the steps of:
 - (i) continuously feeding a packaging material as tubing from a supply;
 - (ii) slitting and unfolding said tubing to form a flat web of said packaging material;
 - (iii) forming said flat web of packaging material around a fed product and longitudinally heat sealing the packaging material formed around the product; and
 - (iv) cutting and sealing the packaging material at one or both ends of the product.
2. A method according to claim 1, wherein in step (iv) the packaging material is cut and sealed at one end of the product and the packaged product is subsequently vacuum sealed.
3. A method according to claim 1, wherein the tubing has a double web width of up to about 550 mm.
4. A method according to claim 1, wherein during feeding the tubing is tracked to ensure that in step (ii) it is substantially centrally slit along its length.
5. A method according to claim 1, wherein prior to or during the longitudinal sealing of the packaging material in step (iii), the packaging material is trimmed along its slit edges formed in step (ii) to remove excess packaging material therefrom.
6. A method according to claim 1, wherein step (iv) is carried out by impulse sealing the packaging material at the end or ends of the product.
7. A packaging apparatus comprising:
 - (i) means for receiving packaging material continuously fed as tubing from a supply, and slitting and unfolding the tubing to form a flat web of the packaging material;
 - (ii) calendering means for receiving the flat web and tensioning the flat web;

- (iii) forming means for receiving the tensioned flat web and forming the flat web around a fed product;
- (iv) heat sealing means for longitudinally heat sealing the packaging material formed around the product; and
- (v) end sealing means for cutting and sealing the packaging material at one or both ends of the product.

8. A packaging apparatus according to claim 7, wherein the calendering means comprises a pair of spaced rollers which are adapted to ensure that the flat web is fed to the forming means at a consistent tension and angle.

9. A packaging apparatus according to claim 7, wherein the forming means comprises a forming shoe which forms the flat web into a tubular shape around the fed product.

10. A packaging apparatus according to claim 7, wherein the end sealing means comprising a hot or cold sealing system.

11. A packaging apparatus according to claim 10, wherein the end sealing means comprises an impulse sealing device which includes at least two complimentary jaw members which clamp the packaging material to form a transverse cut in the packaging material, and which form a seal on one or both sides of the formed transverse cut.

12. A packaging apparatus according to claim 7, further comprising means for trimming excess packaging material from the flat web of packaging material.

13. A packaging apparatus according to claim 7, further comprising means to facilitate centre tracking of the tubing to ensure that it is slit centrally along its length by the slitting and unfolding means.

14. A packaging apparatus according to claim 13, wherein the means to facilitate centre tracking of the tubing includes one or more sensors.

15. A packaging apparatus according to claim 7, further comprising sensing means for auto-positioning of a product for end sealing.

Evidence Appendix

Not applicable

Related Proceedings Appendix

Not applicable